



Opening Statement of Energy Subcommittee Chairman Randy Weber

Energy Subcommittee Hearing

From Transformative Science to Technological Breakthroughs: DOE's National Laboratories

February 12, 2025

Good Morning, today the Energy Subcommittee will be examining the U.S. Department of Energy's National Laboratories and their role in advancing scientific discoveries as well as developing innovative technologies. Our discussion will explore several topics including research security, DOE's world leading user facilities, and emerging technologies.

Since its early formation in World War II, the National Laboratories have consistently been at the forefront of scientific achievement. As the largest federal recipient of basic research funding in the physical sciences, the National Labs and their 28 user facilities have taken on the most fundamental challenges in the fields of computer science, high energy physics, fusion energy, and material science. Our labs met those challenges and made significant scientific breakthroughs, including sequencing the first human genome, mapping the universe, achieving fusion ignition, and discovering 22 of the elements on the periodic table. These achievements were instrumental to U.S. technological leadership creating new industries and products.

In tandem, through public private partnerships, the National Labs play a major role in transforming our energy sector. For instance, the National Energy Technology Laboratory, known as NETL, worked with industry to develop hydraulic fracturing technology. Before its widespread use in the late 2000s, the United States was in a dire energy state relying on foreign powers to supply natural gas. As a result, the US built LNG terminals, including one in Freeport Texas, to import trillions of cubic feet of natural gas. Due to NETL's collaborative work with industry, the United States repurposed those same terminals to export LNG to our allies while reducing the cost of energy at home. This showcases the importance of public private partnerships and their ability to ensure our national security and energy security.

Likewise, the National Laboratories are involved in the development of next-generation energy technologies such as advanced nuclear energy. For over the last twenty years, researchers at Oak Ridge and Idaho National Labs have made significant improvements to TRISO fuel, which is a fabricated fuel used in GEN IV reactors. Partly due to the labs' work, TRISO fuel has been adopted by some of the leading advanced reactor companies including X-Energy, a recipient of the Advanced Reactor Demonstration Program. X-Energy plans to use this fabricated fuel for its XE-100 reactor, which will provide power and heat to Dow's industrial production facility in Seadrift Texas, just south of my district. Moreover, the labs work in fabricated fuels along with their ability to supply High-Assay Low-Enriched Uranium, or "HALEU" could bring forth a new nuclear renaissance.

With our focus on the National Laboratories, I would be remiss if I didn't bring up the CHIPS and Science Act. Back in the 117th Congress, I, as the Energy Subcommittee Ranking Member,

along with House Science Committee members worked across the aisle to produce the Department of Energy Science for the Future Act, which included my bill, the Computing Advancements for Materials Science (CAMS) Act. This large comprehensive House product ultimately became the base text to the CHIPS and Science Act, which reauthorized the Office of Science's basic research programs, authorized upgrades and experimental facilities such as the Electron Ion Collider at Brookhaven National Laboratory, and directed DOE to implement new research security provisions.

Despite the widespread support for this bill, Congress has yet to appropriate to the levels authorized in the CHIPS and Science Act. This failure is partly due to the Biden Administration's prioritization of new and untested demonstration and deployment programs. While the Biden Administration directed close to \$100 billion for over 70 new programs, the Office of Science and its labs received only \$2 billion, which is a paltry 2 percent of funding outside of the traditional appropriation process.

This doesn't include the Biden Administration's risky loan office, which doled out tens of billions to its politically-connected clean energy friends. In 2017, I led a joint subcommittee hearing titled "Risky Business: The DOE Loan Guarantee Program" where I highlighted in my opening statement that the Ivanpah solar project would come at the cost of the ratepayers if the "project fails and goes into default." With the recent announcement by PG&E ending its relationship with Ivanpah, it seems that my prediction was correct.

Moreover, I hope that the Trump Administration will work with Congress to reprioritize the Department to focus on basic research and its labs; this will ensure U.S. competitiveness and technological prowess in the 21st century.

I would like to thank our witnesses for their testimony, and I look forward to our conversation here today.